UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,941	11/14/2003	Michael W. Shapiro	03226.348001; SUN040250	8939

32615   7590   03/27/2008
OSHA LIANG L.L.P./SUN
1221 MCKINNEY, SUITE 2800
HOUSTON, TX 77010

EXAMINER
SMITH, CHENECA

ART UNIT	PAPER NUMBER
2192	

NOTIFICATION DATE	DELIVERY MODE
03/27/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lord@oshaliang.com
hernandez@oshaliang.com
DOCKETING@OSHALIANG.COM

	Application No.	Applicant(s)
Office Action Summary	10/713,941	SHAPIRO ET AL.
	Examiner	**Art Unit**	
	CHENECA P. SMITH	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _11 December 2007_.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _1-6,10-15,17,19,20 and 22-24_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-6,10-15,17,19,20 and 22-24_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on `11/14/2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Remarks

1.   Applicants' amendment and response dated December 11, 2007 responding to the September 11, 2007 Office Action provided in the rejection of claims 1-21, wherein claims 1,10,11, and 20 have been amended, claims 7-9, 16,18, and 21 have been cancelled, and new claims 22-24 have been added. Thus claims 1-6, 10-15, 17, 19-20, and 22-24 remaning pending in this application and have been fully considered by the examiner.

2.   Applicant's arguments with respect to claims1-6, 10-15, 17, 19-20, and 22-24 have been considered but are moot in view of the new ground(s) of rejection.

3.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Claim Objections

4.   Claim 17 is objected to because of the following informalities: Claim 17 depends

upon claim 16, which has been cancelled. It appears that claim 17 should be dependent

upon claim 11 and has been examined as such. However, appropriate correction is

required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1, 2, 11, 12, 20, and 22-24 are rejected under 35 U.S.C. 102(e) as being

anticipated by Vaught (US 2005/0010930 A1).

As to claim 1, Vaught teaches a method for tracing an instrumented program,

comprising:

registering an instrumentation provider with a tracing framework (see paragraph [0020]

lines 13-15),

associating the instrumentation provider with a trace point to provide a probe

in the instrumented program (see paragraph [0020] lines 1-4 and lines 7-8),

selectively enabling the probe to obtain an enabled probe (see paragraph [0020], lines

1-4 and lines 7-8),

wherein enabling the probe comprises assuring that control flow is transferred to the

tracing framework when the enabled probe is fired (see paragraph [0023] lines 5-7 and

lines 34-39),

wherein enabling the probe is performed using a mechanism specific to the

instrumentation provider (see paragraph [0023], lines 5-7 and lines 34-39),

firing the enabled probe during execution of the instrumented program (see paragraph

[0023] lines 9-11),

transferring control flow to the tracing framework when the enabled probe is fired,

wherein transferring control flow to the tracing framework is performed using the

mechanism specific to the instrumentation provider (see paragraph [0023] lines 5-7 and

lines 34-39), and

performing an action associated with the probe wherein the action is performed by the

tracing framework when control flow is transferred to the tracing framework (see

paragraph [0010] lines 5-12 and paragraph [0024] lines 1-3).

As to claim 2, Vaught teaches the method of claim 1, further comprising

receiving a request from a tracing consumer to selectively enable the probe (see

paragraph 0018] lines 14-17).

As to claim 11, Vaught teaches a system for tracing an instrumented program

having a trace point, comprising:

a processor (see FIG.1, 125 and associated text),

a memory associated with the processor (see FIG.1, 120 and associated text),

a tracing framework resident in the memory and executing under control of the

processor (see FIG.2, 115 and associated text),

an instrumentation provider resident in the memory and executing under control of the

processor (see FIG.2, 202 and associated text), and

a tracing consumer resident in the memory and executing under control of the

processor, wherein the instrumentation provider is configured to associate the trace

point to a probe and to enable the probe (see paragraph [0020] lines 1-4 and lines 7-8),

wherein enabling the probe comprises assuring that control flow is transferred to the

tracing framework when the enabled probe is fired (see paragraph [0023] lines 5-7 and

lines 34-39),

wherein enabling the probe is performed using a mechanism specific to the

instrumentation provider (see paragraph [0023], lines 5-7 and lines 34-39),

wherein the tracing consumer is configured to request that the probe be enabled,

wherein the request defines an action to perform when the enabled probe is fired (see

paragraph [0010] lines 5-12 and paragraph [0024] lines 1-3) and

wherein the tracing framework is configured to:

register the instrumentation provider (see paragraph [0020] lines 13-15),

forward the request to the instrumentation provider (see paragraph [0020] lines 13-15)

and perform the action wherein the action is performed when control flow is transferred

to the tracing framework using the mechanism specific to the instrumentation provider

(see paragraph [0010] lines 5-12 and paragraph [0024] lines 1-3).

As to claim 12, Vaught teaches the system of claim 11, wherein the tracing

framework is further configured to create the probe (see paragraph [0020] lines 1-4).

As to claim 20, Vaught teaches a network system having a plurality of nodes,

comprising:

an instrumented program having a trace point (see FIG.2, 160 and associated text),

a tracing framework (see FIG.2, 115 and associated text),

a tracing consumer (see FIG.1, 104 and associated text) and

an instrumentation provider configured to associate the trace point to a probe and to

enable the probe (see paragraph [0020] lines 1-4 and lines 7-8),

wherein enabling the probe comprises assuring that control flow is transferred to the

tracing framework when the enabled probe is fired (see paragraph [0023] lines 5-7 and

lines 34-39),

wherein enabling the probe is performed using a mechanism specific to the

instrumentation provider (see paragraph [0023], lines 5-7 and lines 34-39),

wherein the tracing consumer is configured to request that the probe be enabled,

wherein the request defines an action to perform when the enabled probe is fired (see

paragraph [0010] lines 5-12 and paragraph [0024] lines 1-3), and

wherein the tracing framework is configured to:

register the instrumentation provider (see paragraph [0020] lines 13-15),

forward the request to the instrumentation provider (see paragraph [0020] lines 13-15),

and perform the action wherein the action is performed when control flow is transferred

to the tracing framework using the mechanism specific to the instrumentation provider

(see paragraph [0010] lines 5-12 and paragraph [0024] lines 1-3),

wherein the instrumented program resides on any node of the plurality of nodes (see

FIG.1, 160 and associated text),

wherein the instrumentation provider resides on any node of the plurality of nodes (see

FIG.1, 115 and associated text),

wherein the tracing consumer resides on any node of the plurality of nodes (see FIG.1

and associated text), and

wherein the tracing framework resides on any node of the plurality of nodes (see FIG.1

and associated text).

As to claim 22, Vaught teaches a computer storage device comprising

instructions for enabling a computer system, under control of a processor (see FIG.1

and associated text), to perform a method for tracing an instrumented program wherein

the method comprises:

registering an instrumentation provider with a tracing framework (see paragraph [0020]

lines 13-15),

associating the instrumentation provider with a trace point to provide a probe

in the instrumented program (see paragraph [0020] lines 1-4 and lines 7-8),

selectively enabling the probe to obtain an enabled probe (see paragraph [0020], lines

1-4 and lines 7-8),

wherein enabling the probe comprises assuring that control flow is transferred to the

tracing framework when the enabled probe is fired (see paragraph [0023] lines 5-7 and

lines 34-39),

wherein enabling the probe is performed using a mechanism specific to the

instrumentation provider (see paragraph [0023], lines 5-7 and lines 34-39),

firing the enabled probe during execution of the instrumented program (see paragraph

[0023] lines 9-11),

transferring control flow to the tracing framework when the enabled probe is fired,

wherein transferring control flow to the tracing framework is performed using the

mechanism specific to the instrumentation provider (see paragraph [0023] lines 5-7 and

lines 34-39), and

performing an action associated with the probe wherein the action is performed by the

tracing framework when control flow is transferred to the tracing framework (see

paragraph [0010] lines 5-12 and paragraph [0024] lines 1-3).

As to claim 23, Vaught teaches the method of claim 1, wherein the probe is

enabled for a plurality of multiplexed tracing consumers, wherein different actions are

associated with the probe for each of the plurality of multiplexed tracing consumers (see

paragraph [0020], lines 1-4 and lines 7-8).

As to claim 24, Vaught teaches the method of claim 1, wherein the

instrumentation provider is a dynamic module, and wherein registering the

instrumentation provider is performed when the tracing framework is already loaded

(see paragraph [0018] lines 1-6 and paragraph [0020] lines 13-15).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 4-6, 10, 13, 14, and 17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Vaught (US 2005/0010930 A1) in view of Boykin et al (US Patent

Application Publication 2004/0123279 A1).

As to claim 4, Vaught teaches the limitations of claim 1, but does not specifically

teach disabling the enabled probe if no tracing consumer is requesting the enabled

probe. In an analogous art, however, Boykin is cited to teach disabling the enabled

probe if no tracing consumer is requesting the enabled probe (see paragraph [0007],

the hooks can manage the execution of the probes, which can be dynamically added or

removed from the registry during runtime and/or dynamically enabled or disabled during

runtime). It would have been obvious to one having ordinary skill in the art at the time of

the invention to combine the teachings of Vaught and Boykin to gain the ability to

dynamically and/or remove probes and to dynamically enable and/or disable probes at

runtime, as disclosed by Boykin (see paragraph [0080]).

As to claim 5, Boykin further teaches removing the probe when the

instrumentation provider that provided the probe is unregistered (see paragraph [0007],

the hooks can manage the execution of the probes, which can be dynamically added or

removed from the registry during runtime and/or dynamically enabled or disabled during runtime).

As to claim 6, Boykin further teaches the method of claim 1, wherein associating the instrumentation provider with the trace point comprises:

determining whether the probe is currently provided at the trace point (see paragraph [0050], *when the injector is notified that a new Java class is being loaded (step 702), it queries the registry to determine whether the newly loaded class needs to be instrumented (step 704)*),

requesting the tracing framework to create the probe if the probe is not currently provided at the trace point (see paragraph [0050], *assuming that the class should be instrumented, the injector then injects hooks at the specified locations (step 708)* thereby *completing the process in the probe injection phase*), and

generating a probe identifier associated with the probe (see paragraph [0046], *the hook can determine whether a probe is enabled for its location by querying the registry, e.g. by providing an identifier for the location in which the hook was embedded*).

As to claim 10, Boykin further teaches the method of claim 1, wherein transferring control flow to the tracing framework calling the tracing consumer using a probe identifier associated with the enabled probe (see paragraph [0046], *the hook can determine whether a probe is enabled for its location by querying the registry, e.g. by providing an identifier for the location in which the hook was embedded*).

As to claim 13, Vaught teaches the limitations of claim 11, but does not specifically teach wherein creating the probe comprises assigning a probe identifier to

the probe. In an analogous art, however, Boykin is cited to teach wherein creating the

probe comprises assigning a probe identifier to the probe (see paragraph [0046], *the*

hook can determine whether a probe is enabled for its location by querying the registry,

e.g. by providing an identifier for the location in which the hook was embedded). It

would have been obvious to one having ordinary skill in the art at the time of the

invention to combine the teachings of Vaught and Boykin to gain the ability to

dynamically and/or remove probes and to dynamically enable and/or disable probes at

runtime, as disclosed by Boykin (see paragraph [0080]).

As to claim 14, Boykin further teaches Boykin further teaches wherein

associating the instrumentation provider with the trace point comprises:

determining whether the probe is currently provided at the trace point (see paragraph

[0050], *when the injector is notified that a new Java class is being loaded (step 702), it*

queries the registry to determine whether the newly loaded class needs to be

instrumented (step 704)),

requesting the tracing framework to create the probe if the probe is not currently

provided at the trace point (see paragraph [0050], *assuming that the class should be*

instrumented, the injector then injects hooks at the specified locations (step 708)

thereby *completing the process in the probe injection phase*), and

generating a probe identifier associated with the probe (see paragraph [0046], *the hook*

can determine whether a probe is enabled for its location by querying the registry, e.g.

by providing an identifier for the location in which the hook was embedded).

As to claim 17, Boykin further teaches wherein the tracing framework is provided with a probe identifier when the probe is fired (see paragraph [0046], *the hook can determine whether a probe is enabled for its location by querying the registry, e.g. by providing an identifier for the location in which the hook was embedded*).

9.   Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaught (US 2005/0010930 A1) in view of Bunnell (US Patent Application Publication 2002/0199172 A1).

As to claim 19, Vaught teaches the limitations of claim 11, but does not specifically teach wherein the tracing framework is configured to unregister the instrumentation provider when the instrumentation provider is unloaded. In an analogous art, however, Bunnell is cited to teach wherein the tracing framework is configured to unregister the instrumentation provider when the instrumentation provider is unloaded (see paragraph [0044], *the instrumentation code dynamically installed is then removed from the target program 18 by selecting each trace point 108 and restoring 110 the entry point instructions previously copied to the corresponding trace buffers 50*). It would have been obvious to combine the teachings of Vaught and Bunnell in order to provide users with an effective and efficient presentation of collected event related data, as disclosed by Bunnell (see paragraph [0013]).

10.   Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaught (US 2005/0010930 A1) in view of Inamdar (US Patent Application Publication 2003/0149960 A1).

As to claim 3, Vaught teaches the limitations of claim 2, but does not specifically

teach wherein the request comprises a tuple having a name component, a module

component, a function component, and a name component. In an analogous art,

however, Inamdar is cited to teach wherein the request comprises a tuple having a

name component, a module component, a function component, and a name component

(see paragraph [0121], *a probe can be uniquely identified by a library name and a probe*

name; the probe body can have one or more sections). It would have been obvious to

one having ordinary skill in the art at the time of the invention to combine the teachings

of Vaught and Inamdar for the advantage of gaining a tool that would aid in the

development, testing, and analysis of software applications, as disclosed by Inamdar

(see paragraph [0011]).

As to claim 15, Vaught teaches the limitations of claim 11, but does not

specifically teach wherein the request comprises a tuple having a name component, a

module component, a function component, and a name component. In an analogous

art, however, Inamdar is cited to teach wherein the request comprises a tuple having a

name component, a module component, a function component, and a name component

(see paragraph [0121], *a probe can be uniquely identified by a library name and a probe*

name; the probe body can have one or more sections). It would have been obvious to

one having ordinary skill in the art at the time of the invention to combine the teachings

of Vaught and Inamdar for the advantage of gaining a tool that would aid in the

development, testing, and analysis of software applications, as disclosed by Inamdar

(see paragraph [0011]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHENECA P. SMITH whose telephone number is (571)270-1651. The examiner can normally be reached on Monday-Friday 7:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CS
3/11/2008

/Tuan Q. Dam/

Supervisory Patent Examiner, Art Unit 2192